

## Patent Abstracts of Japan

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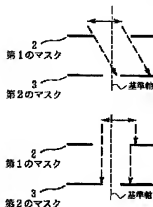
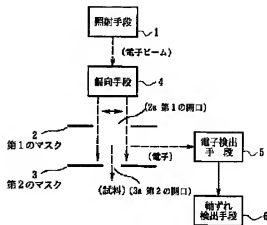
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TITLE : ELECTRON BEAM DEVICE AND  
 DETECTING METHOD FOR SHIFT IN  
 ELECTRON BEAM AXIS



ABSTRACT : PROBLEM TO BE SOLVED: To detect shift in incident angle and shift in incident position of a beam axis by detecting how electron beams which are limited by a first mask are irradiated to a second mask.

SOLUTION: When electron beams are made to scan a first aperture 2a by a deflecting means 4, the electron beams are limited by a first mask 2, and only the beams passing through the first aperture 2a reach a second mask 3 and scan its surface. An electron detecting means 5 detects beam electrons with which the second mask 3 is irradiated. This detection includes direct detection of electrons of electron beams irradiated to the second mask 3 and indirect detection of detecting electrons of the second mask 3 generated by the irradiation. Shift from a reference axis is detected on the basis of output distribution equivalent to the scanned image of the second mask 3 of the detected electrons. The incident angle shift and incident position shift of a beam axis can be detected, by detecting how the electron beams which are limited through the first mask 2 are irradiated to the second mask 3.

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